

Work Order ID 94852

December-20-12 10:06:02 AM

shp Feb 10

94852

Page 1

Item ID: D2521

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Bearpaw 205

Start Date: 20/12/2012 Start Qty: 14.00

14

Cust Item ID:

Required Date: 03/01/2013 Req'd Qty: 14.00

14

Customer:

Reference:

Approvals:

Process Plan: MLS

Date: 12-12-20

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2521	Rev J								
120		0.00							
120	FLOW WATER JET								
Waterjet	Memo	0.00				16	0	B13-1-9	
FLOW CNC Waterjet	Cut Blank as per D2521 blank file							Jm 13-1-10	
130		0.00							
130	HAAS CNC VERTICAL MACHINING #1								
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	1-Inspect material for defects or damage prior to machining 2-Machine as per Folio and Dwg D2521 Identify as D2521 3-Deburr								
140		0.00							
140	QC2- Inspect parts off machine FAI/FAIB								
QC	Memo	0.00							
Quality Control									

ore/b.o

2013-01-14

16

0

Jm

ore/b.o

2013-01-14

16

0

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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FAULT CATEGORY			
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 94852

December-20-12 10:06:02 AM

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Page 2

Item ID: D2521

Accept

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Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw 205

Start Date: 20/12/2012 Start Qty: 14.00

14

Cust Item ID:

Required Date: 03/01/2013 Req'd Qty: 14.00

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.00

OK 13/01/16

16

✓

Quality Control

160

Identify as per dwg & Stock Location: _____

0.00

160

Packaging

Memo

0.00

PPP

93980 2x

9480814X

13/01/17 (16)

Packaging

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.00

13/1/17

Quality Control

13-01-17

NCR: Yes / No

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Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Picklist Print

December-20-12 10:06:06 AM

Work Order ID: 94852

Parent Item: D2521

Parent Item Name: Bearpaw 205

94852

D2521

Start Date: 20/12/2012

Required Date: 03/01/2013

Start Qty: 14.00

Required Qty: 14.00

Comments: IPP Rev:A 08-10-01 New Manufacturing Method JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MUHMWB10

Purchased

No

sf

296.4950

~~103.1579~~

MUHMWB10

**

118 S.F.

B13-1-9

UHMW 1" Black

JM 13-1-10

Location

Loc Qty

Loc Code

MAT019

296.4949895

121278

12.0949895

122575

47.6

123229

53

123704

63.8

123949

120

124167

124167

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

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QA Closed: _____ Date: _____

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DART AEROSPACE LTD		Work Order:	94852
Description: Bearpaw		Part Number:	D2521
Inspection Dwg: D2521	Rev: J	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension			Actual Dimension	Accept	Reject	Method of Inspection	Comments
Dim	Min	Max					
A	0.260	0.266	0.260	✓			OFC-01
B	0.90	0.96	0.930	✓			"
C	0.27	0.330	0.315	✓			OFC-07
D	0.470	0.530	0.480	✓			OFC-07
E	21.740	21.760	21.753	✓			31006
F	0.72	0.780	0.752	✓			OFC-01
G	0.35	0.410	0.375	✓			"
H	11.490	11.570	11.503	✓			31006
I	3.41	3.47	3.428	✓			OFC-01
J	11.790	11.810	11.803	✓			31006
K	9.47	9.53	9.503	✓			"
L	7.190	7.210	7.203	✓			"
M	6.910	6.970	6.941	✓			"
N	44.47	44.530	44.500	✓			OFC-01
O	6.590	6.650	6.631	✓			OFC-01
P	0.940	0.980	0.960	✓			"
Q	18.97	19.03	19.00	✓			OFC-01
R	0.350	0.410	0.378	✓			OFC-01
S	0.740	0.780	0.758	✓			"
T	0.240	0.280	0.256	✓			"
U	0.370	0.410	0.393	✓			"
V	0.740	0.780	0.754	✓			"
W	0.740	0.780	0.760	✓			"

Measured by: <i>OFC / b.a</i>	Audited by: <i>amr</i>	Prototype Approval:	N/A
Date: 2013-01-14	Date: 13/01/14	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O D205-564-011 & D430-688-011	KJ/RF	
B	05.06.15	Dimensions and tolerances changed	KJ/RF	
C	06.08.31	Dimensions updated per D2521 Rev. J	KJ/JLM	<i>[Signature]</i>



DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. J
		D2521	SHEET 1 OF 3
DATE	TITLE		SCALE
06.07.28	205 BEARPAW		NTS
A	95.11.28	NEW ISSUE	
B	96.01.11	SHOW BENDING MOVE HOLES	
C	96.01.29	ADJUST HOLE LOCATION FOR TOOLING	
D	96.05.14	ADJUSTED BEAR PAW THICKNESS	
E	96.12.18	43.500 WAS 46.750	
F	97.05.07	ADDED REAR POCKET, MOVED HOLES	
G	98.08.06	ADD C'BORE AND CHAMFER EDGES	
H	03.01.30	CHANGE GEOMETRY FOR RUN-ON LDG.	
I	05.05.20	REMOVE BEND; CHANGE TOLERANCES	
J	06.07.28	CHANGE FOR FLOAT SKIDTUBE	

12-12-20
NO. 91852MCS
W. J. J. J. J. J.
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

RELEASED
06 08-23

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DART

DESIGN

DRAWN BY

DART AEROSPACE LTD

HAWKESBURY, ONTARIO, CANADA

CHECKED

APPROVED

DRAWING NO.

REV. J

D2521

SHEET 2 OF 3

DATE

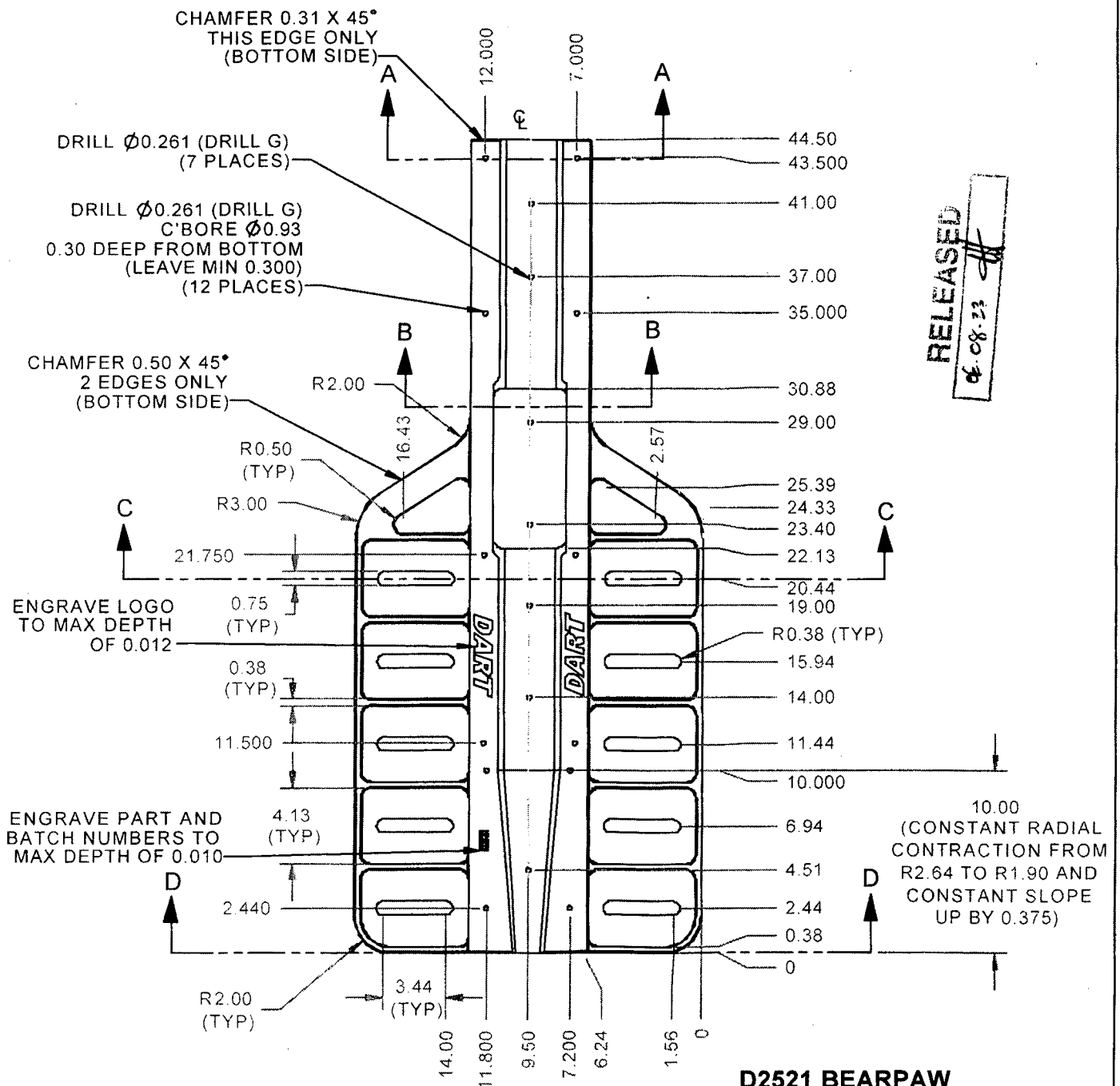
TITLE

SCALE

06.07.28

205 BEARPAW

1:8

**NOTES:**

- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK (MACHINE TO 0.950)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.030
- 6) PART IS SYMMETRIC ABOUT ϕ

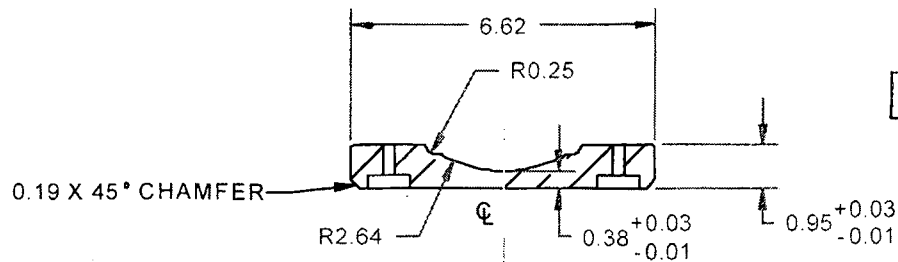
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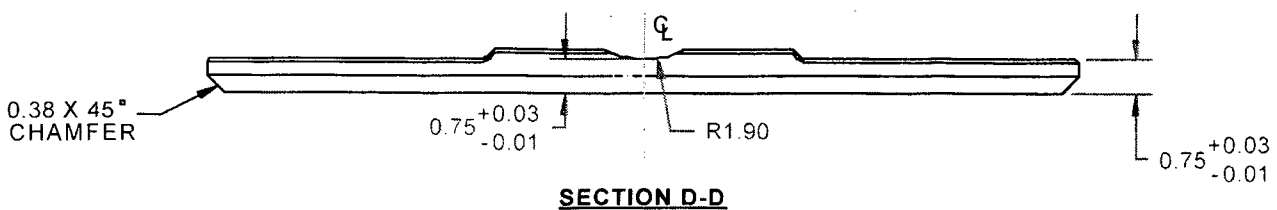
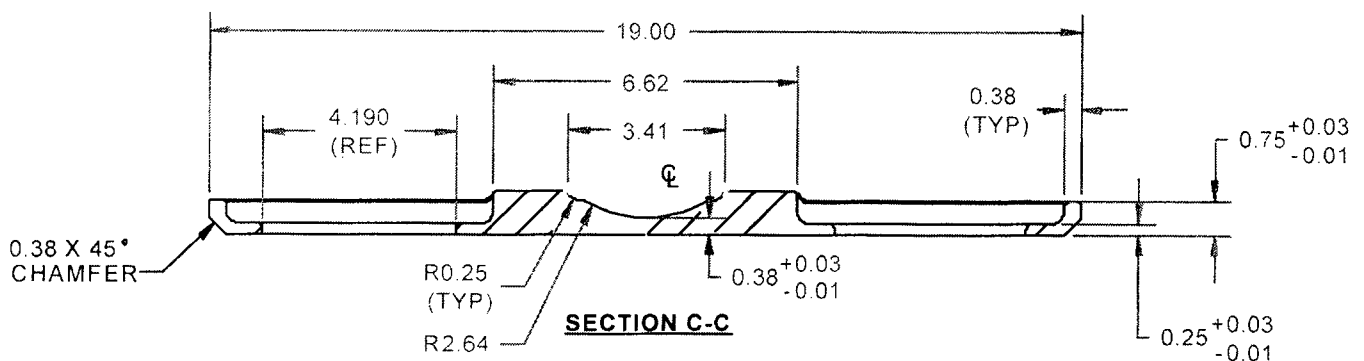
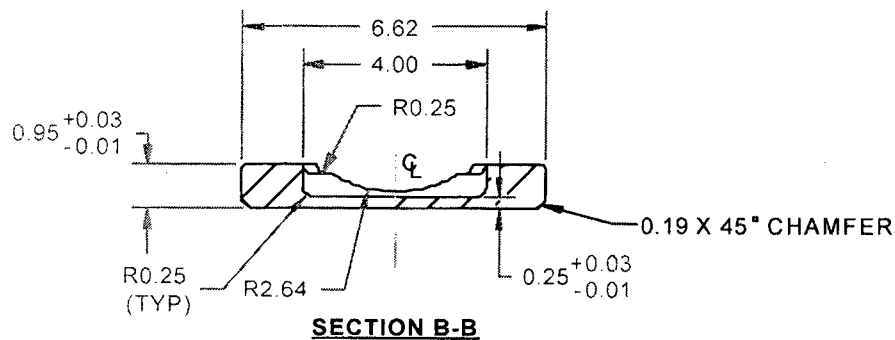
25876



DESIGN	DRAWN BY	DART AEROSPACE LTD	
	C.B.	HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. J
CP		D2521	SHEET 3 OF 3
DATE		TITLE	SCALE
06.07.28		205 BEARPAW	1:4



RELEASED
06.08.23



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